

Uterine Scar Condition and Complications Associated with Repeat Caesarean Section: A study in a Tertiary Care Hospital

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ABSTRACT

Introduction: Lower segment cesarean section is the commonest surgical procedure in obstetrics. Repeating a cesarean section in subsequent pregnancies is the usual method of termination which involves many complications. Our objective was to study these complications and difficulties observed in a repeat cesarean section.

Material and methods: It was a prospective observational study of 241 cases of repeat cesarean section from October 2017 to September 2018 in department of obstetrics and gynecology of Hi-Tech medical college and hospital, Bhubaneswar, Odisha.

Results: In this study, total 1610 patients are taken. Among these most common indication for cesarean section is CPD i.e.56 (23%). Most common incidence of intraoperative complication of previous cesarean section is adhesion i.e. 124(51.61%).

Conclusion: Maternal morbidity is a cause of concern in repeat cesarean section because of the intraoperative complications encountered during surgery and thereafter. Reduction in primary caesarean rate can reduce the complications. Patients with previous cesarean section are categorized as high risk and counselled for VBAC in suitable cases.

Keywords: Repeat Caesarean Section, Intraoperative Complication, Adhesions.

INTRODUCTION

Lower segment caesarean section is the commonest obstetric surgery performed worldwide. It is ideally done when vaginal delivery is contraindicated or is found unsafe for both mother and fetus. But the rate of caesarean section is rapidly increasing since last few decades. The international health care community has considered that the rate of ideal caesarean section is between 10 to 15%. This was based on the statement by a panel of reproductive health experts at a meeting organized by the world health organization in 1985 in Fortaleza, Brazil.¹ According to WHO guidelines published in 2015, caesarean section rates higher than 10% are not associated with reductions in maternal and newborn mortality rates. The guidelines also state that caesarean section can cause significant complication, disability or death in a setting that lack facility to conduct safe surgery and treat surgical complication.^{2,3,4} Main cause of this increase in incidence is due to decrease in rate of vaginal birth after caesarean section and also increased number of primary caesarean section on maternal request. Though the facilities have improved and the surgery now is considered to be safer than in the past, still the risk is considerably higher than the

vaginal delivery. Repeating a caesarean section in subsequent pregnancies is a common mode of delivery⁵ and these repeat caesareans make it even more difficult, the complications (both intraoperative and postoperative) increasing with increase in number of sections. The common complications that are encountered in these cases are intra-abdominal dense adhesions, morbidly adherent placenta, uterine scar dehiscence or rupture, caesarean hysterectomy, bowel and bladder injury.^{6,7,8,9} The present study aimed to know about the surgical difficulties and complications experienced by surgeons in a case of repeated caesarean section.

MATERIAL AND METHODS

A prospective study was conducted over a period of one year from October 2017 to September 2018 in department of obstetrics and gynecology, Hi-tech medical college and hospital, Bhubaneswar, Odisha. This is a tertiary care centre in which many referral cases are admitted along with a good number of booked cases of its own. A total number of 241 cases of repeat caesarean sections were studied and data regarding intraoperative findings of all these cases was recorded. An informed consent was taken. The surgeons were requested to note any particular difficulties they encountered while operating. Post-operative complications in these patients were also recorded. The case records were then analyzed and the data was expressed in proportions and percentages.

Women with history of previous one caesarean section with singleton pregnancy at term attending outpatient department (OPD) are counselled about risks and benefits of repeat caesarean section Vs trial of labour (TOL). Elective caesarean sections were done on the patients who had history of previous caesarean section at 38 weeks not willing for trial of labour. Repeat Caesarean sections were also performed in

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many referred cases as well.

Inclusion Criteria

1. All cesarean sections irrespective of their number of previous cesarean sections.
2. No other disease complicating pregnancy (cardiac disease, gestational diabetes, bronchial asthma, eclampsia etc.).

Exclusion Criteria

1. All primary cesarean sections irrespective of the parity
2. Previous LSCS with associated medical complications.

RESULTS

A total number of 241 cases of repeat cesarean sections were included in the study, admitted to our hospital between October 2017 to September 2018.

Variables	No. of Patients	%
1) Age (in yrs)		
<20	4	1.6
20-30	131	54
31-40	97	40
>41	9	3.73
2)Religion		
Hindu	154	63.90
Muslim	75	31.12
Others	12	4.9
3)Socioeconomic		
Upper	97	40.24
Lower	144	59.75
4) Booked status		
Unbooked	135	56
Booked	106	43.93

Table-1: Sociodemographic data

Indication	No. of Patients	%
Fetal distress	48	19.91
CPD	56	23.23
Malpresentation	24	9.95
Short interval b/w pregnancy	18	7.46
Placenta previa	12	4.9
BOH	11	4.56
Obstruted labour	9	3.73
Rupture uterus	2	0.82
Scar tenderness	38	15.76

Table-2: Indication of caesarean section:

Types	No. of Patients	%
Parietal peritoneum to anterior surface of uterus	32	13.27
Parietal peritoneum to bladder	15	6.22
Parietal peritoneum to Omentum	20	8.29
Omentum to uterus	14	5.80
Parietal peritoneum and bowel	2	0.82
Bowel and uterus	41	17.01

Table-3: Type of adhesion

Intraoperative	No. of Patients	%
Adhesion	124	51.68
Scar dehiscence	20	8.29
Scar rupture	2	0.82
Bladder drawn up	4	1.65
Hemorrhage	16	6.63
Adherent placenta	2	0.83
Increase Duration of sx	8	3.31
Injury to surrounding str	4	1.65
Postoperative		
Wound infection	14	5.80
Blood transfusion	19	7.88
Pelvic Pain	24	9.95
Postpartum endometritis	2cases	
Thrombotic events	1cases	
Ileus	1cases	

Table-4: Incidence of complications

54% patients belong to the age group of 21-30 years. Age, religion, socioeconomic status and booking status are shown in table 1.

Table 2 shows indication of cesarean section. The main indication was CPD i.e.23% and scar tenderness was another important indication (15.76%).

Table 3 shows types of adhesion. Total number of patients were 124 in which maximum number of adhesions were between the bladder and uterus (17.01%) followed by that between parietal peritoneum to anterior surface of uterus (13.27%).

Table 4 shows Adhesions were most commonly encountered during surgery (51.68%).scar dehiscence was also found in 8.29%. Excessive hemorrhage occurred in 6.63%.In postoperative period pelvic pain was the most common complications (9.95%).

DISCUSSION

With the advancement of obstetrical practices, the number of primary caesarean sections has increased and so also the rate of repeat caesarean section. These multiple caesarean sections predispose to an increased risk of intraoperative and postoperative complications which is a cause of concern. Therefore it's important to have data regarding these complications and to counsel the women in favour of trial of labour or a planned repeat section.

Number of women who underwent emergency caesarean section in our study is162 which was more

than women who underwent elective caesarean section (79). This may be because many cases were not booked cases with inadequate antenatal checkups and were referred from nearby hospitals or reported to the hospital in last moment.

The most common complication that is observed in our study is adhesion (51.68%) which is very similar to a study done by Lyell D J et al.¹⁰ Several other studies have reported that more the number of repeat caesarean sections more is the rate of adhesion.^{11,12} Adhesions give rise to acute morbidity in form of bleeding during surgery, increased duration of surgery and injury to surrounding structures. In our study, the most

common adhesion is between bladder and uterus (17.01%) which is very similar to the study done by Ramkrishnarao M A et al.¹³ In another study by Sinha et al¹⁴ bladder to uterine adhesion is 30%.The second most common adhesion in our study is between parietal peritoneum to anterior wall of uterus (13.27%).

Scar dehiscence is another important complication i.e. encountered in our study (8.29%).Nazaneen S et al¹⁵ (7.69%) and Ramkrishnarao MA et al¹³ (6.62%) have similar findings in their studies too. This is a common finding in repeat cesarean sections. Only 2 cases presented with scar rupture. 6.63% of cases showed excessive blood loss. In a study by Rouse D J et al blood loss increases with increase in number of cesarean sections.¹⁶

Among post partum complications pelvic pain after surgery was most common (9.9%). Blood transfusion was required in 19 cases, mostly due to excessive blood loss during surgery. 14 cases had postoperative wound infections.

CONCLUSION

From the above study we concluded that maternal morbidity significantly increases with increase in number of cesarean sections in the same patient. Hence it is very important to reduce the number of primary cesarean sections, the rate of which has been on rise due to modernization of obstetrics in the last two decades. Though safe motherhood and a healthy baby is the top priority, the number of unnecessary primary cesarean sections has to come down by proper counseling of the patients about the maternal and perinatal risks and benefits of surgery versus vaginal birth after cesarean section (VBAC). Trial of labour is to be considered while planning a mode of delivery in suitable cases. A repeat cesarean section should be elective and well planned before hand wherever necessary to reduce the incidence of intraoperative and postoperative complications.

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